

A NEW DRAGON-FLY OF THE GENUS *ANAX* FROM MADAGASCAR.

BY ROBERT McLACHLAN, F.R.S., &c.

ANAX TUMORIFER, *n. sp.*

Length of abdomen (*cum appendic.*), ♂, 63 mm., ♀, 60 mm. Length of posterior-wing, ♂ ♀, 53 mm. Expanse, ♂ ♀, 109 mm.

♂. Wings hyaline (not tinted). Neuration black (a few transverse nervules, near the base, brownish); costal nervure yellow externally. Membranule blackish, whitish at base. Pterostigma brown, rather short (5 mm.), very narrow. 18 antecubital and 10 post-cubital nervules in the anterior-wings. Face and mouth-parts yellowish (probably green in life); labrum regularly excised, the excision bordered with very pale brown. Top of front slightly produced, semi-circular anteriorly, where it is slightly margined by a greyish line; a large, nearly circular, black spot, not produced in the middle, but the outer edge with four or five not very distinct denticulations: vesicle black behind, yellow in front (with a crest of black hairs); for a short distance on either side is a narrow black line margining the eyes. Antennæ black. Occiput yellow, flat, triangular, slightly rugulose. Back of head yellow, margined with black above in the middle.

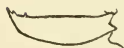
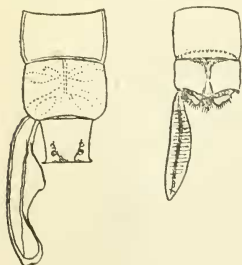
Thorax yellowish (probably green in living insects), with fine cinereous pubescence.

Legs shining black; anterior femora yellowish beneath; length of posterior femora, 10 mm.

Abdomen slender (not depressed), cylindrical, considerably swollen, and afterwards constricted, at base. Colour dark brown (altered), with indications of a black dorsal line, twice expanding on segments 4—7. Lateral impressions extending from segments 3—9 (but only faintly indicated on 3 posteriorly). Segments 9—10 slightly depressed, each slightly broader than long, and sub-equal. Segment 10 with a blunt central longitudinal carina, on either side of which are two foveæ, one posteriorly the other anteriorly, the latter being larger and deeper than the former.

Superior appendages long ($8\frac{1}{2}$ mm.), nearly equalling segments 8—10 united, picaceous, somewhat castaneous internally; they are slender, and their outer edges

nearly straight up to the incurved apices; a strong raised keel above from the base to near the apex: the inner edge is at first straight, but somewhat before the middle it is enlarged into a very strong obtuse dilatation (the edge of this dilatation is granulose if viewed laterally), after which it is broadly excised, and again slightly dilated to the apex, which is very obtuse, incurved, viewed above it has a rather broad explanate margin beyond the elevated subapical portion: the upper surface is deeply concave between the central keel and the raised outer edge up to the elevated sub-apical portion; the lower surface shallowly concave, with the outer and inner edges much raised; the inner edge beyond the dilatation is double with a concavity between, somewhat resembling the lateral impressions on the abdomen. Inferior appendage



somewhat resembling the lateral impressions on the abdomen. Inferior appendage

pale yellow, very short, nearly quadrate, scarcely extending to the commencement of the dilatation of the superior, hardly narrowed to the end, which is excised, with the angles upturned and produced into an acute black tooth; the lower surface is flattened with the sides strongly upturned, upper surface deeply concave; within each outer angle is an elevated black blunt tubercle, which, if viewed laterally, conveys the erroneous impression of belonging to the edge and not to the inner surface.

♀ (very adult). Generally similar to the ♂.

Wings very strongly and almost uniformly tinged with bright greenish-yellow (slightly paler at base and at extreme apex), which is sometimes more intense on the nervules, leaving the centre of the cellules paler. 18—19 ante-cubital nervules in the anterior-wings.

Back of head for most part blackish.

Abdomen stouter; the dorsal dark line more distinct: 10th segment transverse, its apical edge with a large transverse impression (or fovea) on either side of a median production, in which are about four short longitudinal impressed striæ.

Appendages very small (about $5\frac{1}{2}$ mm.), black, in the form of small flattened leaflets narrow at the base, with straight outer edge, and a slight central keel; apex acute. Valvules not exceeding the 9th ventral segment, black, provided with small and short reddish appendages, of which the second joint consists of several bristles.

[I think a second ♀ (with equally yellow wings) must belong here. It differs in the black spot of the top of the front being conical instead of nearly orbicular, in the slightly smaller wing dimensions (post.-wing, 50 mm.), and especially in the much shorter abdomen, which (appendages absent) is only 50 mm. long, without appearing to have lost any of its length (excepting the appendages), although it has been broken and mended.]

The figures represent the apex of abdomen of ♂ and ♀ (with appendages), from above, and the inferior appendage of ♂, from side, more enlarged.

Hab. : Madagascar.

The ♂ of this insect is essentially peculiar from the form of the anal appendages, and the ♀ from the uniformly-tinted greenish-yellow wings. The ♂ of *A. dorsalis*, Burm., from the Cape of Good Hope, remains, I think, unknown, but from Hagen's detailed description of the ♀ type (Verh. zool.-bot. Ges. Wien, 1867, p. 37), it cannot belong here, according to the form of the spot on the top of the front, the markings of the abdomen, and especially the colour of the legs.

From the same collection from Madagascar I have a ♂ *Anax* that it would be difficult to separate from *A. formosus*, but as has been already remarked with regard to South African examples, probably of this species, the body is slightly more slender, and the labrum margined with brown instead of black.